



DEPARTMENT OF THE NAVY
 ATLANTIC DIVISION
 NAVAL FACILITIES ENGINEERING COMMAND
 NORFOLK, VIRGINIA 23511

TELEPHONE NO.
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IN REPLY REFER TO:
 032:RLW:sj
 11010/CAMLEJ
 24 March 1970

From: Commander, Atlantic Division, Naval Facilities Engineering Command
 To: Commanding General, Marine Corps Base, Camp Lejeune, N. C.
 Subj: Master Plan for Marine Corps Base, Camp Lejeune

Ref: (a) CMC ltr AO4K-nd-14 of 8 Jun 1967
 (b) LANTDIV ltr 0325:RLW:dp of 22 Apr 1968
 (c) CG MCB CAMLEJ ltr 23-201:MMJ:mkc of 16 Sep 1968
 (d) CMC ltr COC-ja 23 Dec 1968

Encl: (1) Master Plan Marine Corps Base, Camp Lejeune

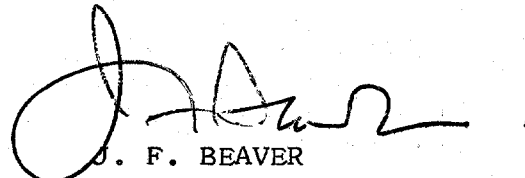
1. The Commandant of the Marine Corps, by reference (a), requested that NAVFAC develop a master plan for Marine Corps Base, Camp Lejeune. In response to this request, Atlantic Division, Naval Facilities Engineering Command awarded a contract to the firm of A. G. Odell, Jr. and Associates, Charlotte, North Carolina, in June 1967 to perform Phase I of the master plan. Phase I was limited in scope to a study of the Hadnot Point billeting and industrial areas to determine if future growth of the industrial complex, coupled with expanded berthing capability necessitated by latest barracks design criteria, would require relocation of the industrial function to permit adequate berthing.
2. As a result of the Phase I study, it was concluded by the A&E that future billeting requirements for the 2nd Marine Division could be satisfied within the existing barracks complex and that adequate area was, therefore, available for the expansion of the 2nd Marine Division Industrial Complex. Phase I was distributed on 22 April 1968, by reference (b).
3. Phase II, also awarded to A. G. Odell, Jr. and Associates, provided for the development of a master plan for the entire Marine Corps Base, to serve as a supporting document for future military construction programs. This master plan for Marine Corps Base, Camp Lejeune, approved in concept by references (c) and (d), has been printed in three parts: Part I, Narrative; Part II, Statistics; and Part III, Maps,

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which are forwarded as enclosure (1). A limited number of copies are submitted at this time because of the absence of appropriate covers. Upon receipt of covers, additional distribution will be made.

4. It is suggested that this Master Plan be forwarded to the Commandant of the Marine Corps via chain of command for formal approval.



J. F. BEAVER
Deputy

Copy to:
CMC
BUMED
FMFLANT
NAVFAC
NAVHOSP CAMLEJ

SUMMARY OF MAJOR RECOMMENDATIONS

COMBINE THE MARINE CORPS SERVICE SUPPORT SCHOOL WITH THE COMBAT SUPPORT SCHOOL AT COURTHOUSE BAY.

MOVE SECOND AMTRAC BATTALION TO MILE HAMMOCK BAY.

DEVELOP STAFF NCO HOUSING AT HADNOT POINT.

EXPAND THE BILLETING AT HADNOT POINT WITHIN THE BOUNDARIES OF THE FIVE EXISTING REGIMENTAL AREAS AND THE PRESENT BILLETING AREA FOR MARINE CORPS BASE.

DEVELOP AN INDUSTRIAL COMPLEX SERVING HADNOT POINT AND FRENCH CREEK.

RELOCATE FIELD MEDICAL SERVICE SCHOOL TO HADNOT POINT.

IMPROVE PINEY GREEN ROAD AND ESTABLISH A NEW SERVICE GATE.

INITIATE A FEASIBILITY STUDY ON AN INTRA-BASE RAPID TRANSIT SYSTEM.

INVESTIGATE THE DISESTABLISHMENT OF RIFLE RANGE.

POSSIBLE RELOCATION OF WATER-ORIENTATED RANGES, AND MODIFICATIONS TO EXISTING BASE SECURITY MEASURES TO FREE NEW RIVER FOR INCREASED MILITARY AND CIVILIAN RECREATIONAL PURPOSES.

REINSTATE A METHOD OF CONTINUING THE LANDSCAPING AND CONSERVATION PROGRAM CONDUCTED BY THE BASE IN EARLIER YEARS.

INITIATE DETAILED ENGINEERING STUDIES TO DETERMINE THE FEASIBILITY OF CENTRAL AIR CONDITIONING SYSTEMS.

IMPROVE BASE SECURITY AND SAFETY BY A NETWORK OF PEDESTRIAN AND VEHICULAR LIGHTING SYSTEMS.

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A. INTRODUCTION

1. OBJECTIVE

A Master Plan for the development and utilization of the Camp Lejeune Area, Marine Corps Base was requested by the Commandant of the Marine Corps by C.M.C. letter A04K-ND-14 of 8 June 1967.

The task of preparing the Master Plan was assigned to the Commander, Atlantic Division, Naval Facilities Engineering Command. Contract No. N62470-67-C-1102 was awarded to the Architectural Firm of A. G. Odell, Jr. and Associates to prepare and develop the Master Plan from information furnished them by the Activity and by Atlantic Division, Naval Facilities Engineering Command.

The final plan, after C.M.C. approval, will be the supporting document for any Military construction program line item or, as appropriate, for the development and utilization of unimproved areas and disposition of land areas determined to be excess.

2. SCOPE

This Master Plan encompasses all of the facilities at the Marine Corps Base, Camp Lejeune, North Carolina, with the exception of the Marine Corps Air Station (Helicopter), New River, and Family Housing. The Master Plan Study consists of 3 parts:

- Part I - Text
- Part II - Statistics
- Part III - Maps

The text describes the Activities and Commands at Camp Lejeune and presents background information relative to the growth and development of the Base. Existing conditions and area considerations are outlined along with major problems. A summary and planning analysis of recommendations describes the plan of development and implementation of the Master Plan.

3. METHODS

After a review of the Basic Facility Requirements List prepared by the Base, and spot checking of the existing assets as determined from prior Marine Corps planning, interviews were held with

representatives of each Command represented on the Base to determine major problems and contributing influences. The purpose of this assimilation of background data was to establish the interrelationships between the Commands, the effect of physical facilities on the functional efficiency of the Commands, and a priority of major needs within the total planning required. Each major problem was identified and alternate solutions investigated prior to the formulation of recommendations for satisfaction of deficiencies and accesses. Most of these changes were reviewed with the Activity for concurrence prior to their incorporation into the total Master Plan. Based on the needs identified in the Basic Facility Requirement Listing, and the evaluation of existing assets as determined by the Marine Corps, primary emphasis was given to retention and rehabilitation as required of existing facilities wherever consistent with the functional needs of Commands. Only in the absence of satisfactory alternatives was any new major construction proposed.

B. AREA CONSIDERATIONS

1. POPULATION AND EMPLOYMENT

Onslow County of North Carolina and the City of Jacksonville, which is the County Seat, has experienced a population growth in the period from 1940 to 1960 that has been quoted as being "unequaled anywhere else in the State". In this twenty-year period, Jacksonville, North Carolina has grown from a small town of 873 people to a City of 13,411 people. Onslow County had a population of 17,939 in 1940 and has increased to 83,494 people during the same period. The projected population for Jacksonville is expected to reach 19,000 by 1970 according to planning estimates of the Jacksonville Development Plan of 1966.

An analysis of this population growth shows how much can be directly attributed to the Marine Corps Base. Of the 13,441 people living in Jacksonville in 1960, 10,000 were Military personnel and their dependents and 1,366 were civilians employed at the Base plus their dependents. Nearly 50 percent of the County population lived in the Jacksonville township according to the 1960 census.

The latest estimates, obtained from the 1966 Development Plan for the City of Jacksonville, indicate that there are 16,700 Military personnel and their dependents living off the Base, and there are 3,500 civilian employees of the Base plus their dependents who live in Jacksonville and Onslow County. This is nearly 25 percent of the total County population. In view of the large direct proportion of Onslow County residents to the assigned personnel at Lejeune, it is obvious that the economy of the City of Jacksonville and Onslow County is greatly dependent upon the personnel and dependents assigned to the Base.

2. INDUSTRY AND COMMERCE

The once sparsely populated agricultural County now has grown into a major trading area. There is very little industry other than the small remaining agricultural activity in the County and the large commercial and retail services that encompass the area, are dependent to a large scale upon the Marine Corps Base and Military personnel.

Industrial promotion on a serious full-time basis is being encouraged by both State and County officials in order to broaden the economic base of the County and to lessen the economic dependence upon Camp Lejeune. This, of course, would occur only as a slow build up, attracting labor from around the surrounding areas, and would not seriously affect the labor market presently dominated by the Marine Corps Base.

3. TRAFFIC AND TRANSPORTATION

The Marine Corps Base, Camp Lejeune, is located on East-West State Highway NC-24 and North-South Trans-State Highway US-17. As a result of the heavy traffic that is generated by the Marine Corps Base, recent traffic studies have been undertaken to develop a long-range thoroughfare plan to relieve the traffic congestion in and around the City of Jacksonville, North Carolina. State traffic planners have expressed a desire to work with the Camp Lejeune Master Plan proposed developments to coordinate traffic problem solutions.

A bypass route for NC-24, to route traffic around the City of Jacksonville and overcome a major traffic bottleneck has been proposed by State traffic planners. Diverting some of the Base generated traffic to the bypass would also be necessary to relieve the present traffic congestion.

The North-South Trans-State Highway System appears adequate for the present traffic flow. East-West traffic artery connections to major Interstate highways would have to be considered less than adequate.

Bus transportation is the major public mass transit mover in the Onslow County Area and trucks are the principal freight movers. The nearest commercial air travel facilities are in New Bern and Kinston, North Carolina, both of which are fifty miles from Camp Lejeune. As a result, private auto is the main source of travel in and through the surrounding areas.

The Civil Aeronautics Board has expressed a desire to plan a major airport in the triad between New Bern, Kinston, and Jacksonville. The center of this area would be located approximately twenty miles to the north-northeast of the Base and would be served by US Highway 17 and subsequent access roads. Piedmont Airlines is the only commercial company now serving the immediate vicinity and the schedules are quite sparse.

A large majority of the New Bern commercial traffic as directly related to Camp Lejeune and a closer airport would create an even greater demand. To date, no further planning has been conducted relative to the increased air facilities in this area.

4. UTILITIES

Utilities at Camp Lejeune are provided by and maintained by Marine Corps Base. The Base is completely self-sufficient in terms of water, sanitary sewer, storm drainage, and is dependent upon private enterprise and/or public utilities for both communications and electrical power. The Base provides no utility service to areas other than United States Government properties.

Potable water for the entire Area is obtained from wells. Because of the geological formation of the soils, large quantities of water are available from wells drilled to an average depth of around 200 feet. The average yield per well is about 200 gallons per minute, but yields up to 1,000 gallons per minute are possible where necessary to insure a constant supply of potable water. Each geographical area of the Base has its own series of wells, and no one area is completely dependent upon the water system of another.

Because of the flat terrain on which the Base is located, several sewage treatment plants have been established to serve each major area of the Base. Some of the existing treatment plants need to be increased as the Base grows, and new sewage disposal facilities will be required wherever new areas are developed.

The City of Jacksonville operates a single municipal sewage treatment plant which is limited and cannot supply all of the rural area surrounding Jacksonville and Camp Lejeune. There are many individual septic tank systems in the surrounding area which contribute to the overall potential pollution of the New River estuary. The effluent from the Jacksonville Municipal Plant, as well as the existing sewage treatment plant on the Base, empties into the New River Basin. Pollution of this body of water must be restricted and improved efficiency of the treatment plants is an ever increasing problem.

The New River and its major tributary creeks provide the primary storm drainage for both Camp Lejeune and the surrounding area. The lack of sufficient slope in this coastal

terrain creates some problems with poor drainage in times of plentiful rainfall. Any major excavation such as borrow pits, tank training areas, road construction, or general training sites may tend to form low points from which storm drainage is difficult. Extreme care is required in locating proposed cut and fill in order to avoid accentuating this problem. Insect control is a problem in the marshy areas of the Base, particularly near the Camp Geiger/New River Air Facility area, and the tidal area on either side of the Inter-Coastal Waterway.

Camp Lejeune has recently installed a Centrex telephone system which has greatly improved the communication facilities at the Base. This has nearly eliminated the problem that existed for the past several years in the isolation of the Base due to limited incoming and outgoing telephone lines. The capabilities of this system should provide the Base with an efficient means of expanding the communications systems as required.

Electrical power is purchased from Carolina Power and Light Company and distributed through the distribution facilities located near Wallace Creek on the northern boundary of the Base. Many of the distribution lines around the Base need to be upgraded as the demand for power increases. The development of any new area on the Base will naturally require extension of electrical service by the Government. The consideration of air conditioning for existing and proposed buildings on the Base poses a problem that is vital to the design of the electrical system. Because of the very heavy electrical demand of cooling equipment, the extension of service must be based on detailed engineering studies outlined in the anticipated loads of air conditioning equipment.

5. GENERAL ECONOMY

The economy and population growth of Onslow County and the City of Jacksonville is directly related to the activities at Camp Lejeune. The annual Military payroll at Camp Lejeune is the backbone of the area economy and the Base employs a majority of the civilian work force, both directly and in indirect support.

The County is rural in nature and the City of Jacksonville has developed principally as a shopping area for the Service personnel and their dependents assigned to Lejeune.

In recent years, a plan for the future development of the greater Jacksonville area has been established to promote industrial diversification in order to broaden the economic base of the community to maintain the future growth of the area. Future industrial growth may possibly lessen the economic dependence on Camp Lejeune, but these changes in general economy would likely be beneficial to the Marine Corps Base. As the cultural and recreational facilities are expanded to accommodate the larger population, the area will become more desirable as a place to live and work, and the reputation of Camp Lejeune as an isolated remote Base will be less valid.

6. GEOLOGY, CLIMATOLOGY, AND TOPOGRAPHY

Geologically, Camp Lejeune is located on a coastal plain consisting of unconsolidated and semi-consolidated sediments that were deposited in and along the margin of a sea that once covered the entire eastern part of North Carolina. The Base is located upon a layer of sand ranging from 10 to 30 feet deep which overlays the Pee Dee sand formation and the Castle Hayne limestone formation. The soil formations in the area consist of varying amounts of sand, clay, shell, rock, marl, and limestone, and come under either of two categories; well-drained soils with Klej sand, or poorly drained soils characterized by Lynchburg and Rutledge sands.

The climate in the Lejeune area is moderate with relatively mild winters and warm, humid summers moderated by south-westerly breezes from the Atlantic Ocean. The mean annual temperature of Camp Lejeune from the period between 1955 and 1966 was 61 degrees. The highest temperature recorded during this period was 100 degrees, and the low was 10 degrees. The mean monthly temperature for July ranged from 71 degrees to 88 degrees, and the January temperatures from 33 degrees to 53 degrees.

Rainfall is abundant with an average of 57.9 inches per year. In July of 1959, a monthly rainfall of 14.34 inches was recorded. Conversely, .44 inches were recorded in December of 1965. The mean annual snowfall of 2.5 inches usually occurs in January. Prevailing winds are north-northwest and the average wind velocity is 6.7 knots.

The topography of the Lejeune area is basically a flat plain which slopes toward the New River and its tributaries where a shallow bluff drops to the waters edge. A series of alluvial deposits and tidal salt marshes parallel the coast line, and these formations are protected by relatively stable sand dunes that form a barrier strip along the coast. Because of the shallow slope of the topography, drainage is the most critical problem which determines the suitability of soil for development. Although there are small areas of unsuitable soil bearing capacity, the area is generally buildable on any section that is relatively dry. Camp Lejeune is encompassed by vast areas of pocosins and swamps which reflect this topographical condition on a much larger scale.

The greater part of suitable land for development at Lejeune and the surrounding area occurs between the elevations of 20 to 40 feet above sea level.

7. AREA JURISDICTION

The Marine Corps Base, Camp Lejeune, is a Federal Conclave and, as such, has exclusive jurisdiction over all matters within its boundaries; however, it has long been the policy to cooperate to the fullest extent with the State, County, and Municipal authorities. Jurisdiction exceptions have been granted from time to time by the Department of the Navy and the Commanding General establishing a working relationship with the other Government officials.

The strip of Highway NC-24, bordering the Base, has been established as an area of concurrent jurisdiction between the Base and the State of North Carolina for purposes of traffic law enforcement. In December of 1953, the State of North Carolina was granted the right-of-way for Highway 172 from Triangle Outpost to Sneads Ferry Gate. The primary law enforcement for this stretch of highway resides with the Base.

Various easements for utilities have been granted to the City of Jacksonville, State of North Carolina, Carolina Power and Light Company, and Carolina Telephone and Telegraph Company. In addition, 14 acres of unimproved timber land, located in the northeast corner of Midway Park, is held in concurrent jurisdiction with the State of North Carolina. The site of the building occupied by the USO Club in Jacksonville is also owned by Marine Corps Base.

The Marine Corps Base owns all land within the boundaries to the high-water mark. Creeks and waters are owned by the State of North Carolina and all navigable waters are under the jurisdiction of the U. S. Army Corps of Engineers, with the exception of drawbridges which are controlled by the U. S. Coast Guard.

C. ACTIVITY DESCRIPTION

1. LOCATION

Marine Corps Base, Camp Lejeune, is located on the coastal plain of North Carolina, 350 miles south of Washington, D. C., and 222 miles north of Charleston, South Carolina. Other Military establishments in the area are the Marine Corps Air Station at Cherry Point, North Carolina which is 52 miles to the northeast, and the Embarkation Port at Morehead City which is 45 miles east.

The Base consists of approximately 170 square miles of territory which lies on both sides of the New River. Along the southeastern boundary of the Base is approximately 14 miles of shore line on the Atlantic Ocean. At the northeast end of the Base, and situated on the New River is the City of Jacksonville.

2. MISSION AND FUNCTION

Camp Lejeune is the home base and training ground for the 2nd Marine Division and the Force Troops, Fleet Marine Force, Atlantic. In addition to basic combat infantry training and rifle qualification, specialized training in guerilla warfare and field training in the most modern weapon systems is conducted on the Base. Combat Support Schools with specialized courses in engineering and demolition and Service Support Schools with specialized courses of training in food service, disbursing, supply, automotive driving and vehicle maintenance are conducted and administered by the Marine Corps Base. Training in amphibious landings and Military support objectives is a function of the Force Troops, Fleet Marine Force.

3. NAVY INVESTMENT

The investment in Camp Lejeune amounts to over \$161,000,000.00. This includes \$1,626,732.00 for land, and nearly \$160,000,000.00 in book value for improvements, buildings, utilities, and structures. Not included in these totals are the costs for collateral equipment installed and used in the structures.

The total replacement value of the improvements only (buildings, utilities, structures, paving, etc.) is estimated to be \$402,169,054.00. This represents over 4,300 buildings and structures, 145 miles of improved roads, 197 miles of electrical distribution lines, 257 miles of telephone lines, 5 water treatment plants, 10 central heating plants, 7 sewage treatment plants, and 8 telephone exchanges.

TOTAL MARINE CORPS INVESTMENT *

	LAND	BLDGS/STRUC	TOTAL INV. **	REPL. VALUE ***
MARINE CORPS BASE	1,619,690	149,303,877	150,923,567	374,891,074
CAMP GEIGER (TRAILER PARK)	-	1,219,069	1,219,069	1,782,354
CAMP KNOX (TRAILER PARK)	-	1,037,557	1,037,557	1,517,058
MIDWAY PARK	-	148,159	148,159	271,431
NAVAL HOSPITAL	7,042	7,884,466	7,891,508	23,707,137
TOTAL	1,626,732	159,593,128	161,219,860	402,169,054

* REF - P-164 DETAILED INVENTORY OF NAVAL SHORE FACILITIES.

** DOES NOT INCLUDE INSTALLED EQUIPMENT.

*** DOES NOT INCLUDE INSTALLED EQUIPMENT OR LAND.

The majority of the capital improvements at the Base were constructed during the period from 1940 to 1943 at the beginning and peak of World War II. The largest single area of investment is Hadnot Point (and recently French Creek) which has come to be known as "Mainside" (which is served by the main gate and is surrounded by the Government housing, U. S. Naval Hospital, rail lines and major traffic arteries).

4. ACTIVITIES

a. ACTIVITY SUPPORT

Marine Corps Base, Camp Lejeune, neither supports, nor relies on support from another installation. The small exceptions to this statement are outlined below. Because of its relative independence to other Military installations, the development of planning criteria is somewhat simplified by the consistency of loads, and paradoxically complicated by the variety of demand from the Activities located on the Base.

The Port of Embarkation at Morehead City is utilized for major troop deployments. Only minimum facilities are maintained at this location for this purpose. This area was excluded from the Master Plan Study. Small troop deployments have been successfully accomplished with small craft loading from the Mile Hammock Bay area of Lejeune, and from the Beach Area to ships anchored off shore.

Activity support provided by Camp Lejeune to Activities not under the command of Marine Corps Base consist of 4th Echelon Maintenance by 2nd Force Service Regiment for all mechanical equipment, excluding aircraft for the Marine Corps Air Station at Cherry Point, North Carolina, and for the Marine Corps Air Station (Helicopter), New River, North Carolina.

b. ACTIVITIES LAND ALLOCATION

The greater part of the Base is undeveloped open land that is allocated to maneuver and training areas. Many firing ranges are dispersed throughout the Base. Most of the land improvements, including buildings, structures, and utilities, are concentrated in the major billeting areas around Hadnot Point.

Paradise Point, Midway Park, Tarawa Terrace, Knox Trailer Park, and Geiger Trailer Park are areas within the boundary of Lejeune that are allocated to family housing. By directive, housing was excluded from this Study.

The U. S. Naval Hospital, Camp Lejeune, occupies a peninsula of land adjacent to the Hadnot Point area. This Hospital serves all of the Military personnel and dependents assigned to Camp Lejeune.

The Marine Corps Air Station (Helicopter), New River, North Carolina, is located west of the New River near Camp Geiger. This air station, like all housing, was excluded from this Study. The majority of Camp Lejeune has been divided into seven basic geographical areas which were retained as identifiable areas of the Base throughout this Study. These areas are:

(1) Hadnot Point

This is the location of the 2nd Marine Division and Marine Corps Base and has customarily been identified as "Mainside". Over 90 percent of the total investment at Camp Lejeune is located within this single area.

(2) French Creek

This is the area recently designated as the home of Force Troops and is immediately adjacent to the southeastern boundary of Hadnot Point.

(3) Montford Point

In this area, have been located all of the Marine Corps Service Support Schools. This is approximately 1,600 acres of land isolated between the New River and the southern boundary of the City of Jacksonville.

(4) Camp Geiger

This is the location of the 2nd Infantry Training Regiment which is established to conduct basic unit tactical training of recent recruits. Immediately adjacent to the Geiger area is the New River Air Station (Helicopter), New River.

(5) Rifle Range

This area is dedicated strictly to the requalification of Marines on three known distance rifle ranges and one pistol range.

(6) Courthouse Bay

This area, taking its name from the bay of water on a narrow portion of New River, is the area designated for the Marine Corps Combat Support Schools.

(7) Basewide/Miscellaneous

Sometime ago, this designation was established to cover all of the territory not specifically encompassed by the six previous geographical areas. For the purpose of Master Planning, this geographical area includes all training areas and remote parts of the Base as well as the 800 Series Category Code.

An illustration of the current and proposed allocation of land by various types of uses is illustrated in Part III of this report.

5. PERSONNEL

There are three major Commands and two tenant Commands located at Camp Lejeune. The mission and function of each Command follows:

a. MARINE CORPS BASE

(1) Mission

To provide housing, training facilities, logistical support, and certain administrative support for Fleet Marine Force units and other units assigned; to conduct specialized schools and other training as directed to receive, process, and conduct individual combat training as directed.

(2) Function

The Marine Corps Base administers all of the permanent facilities on the Base including over 4,800 housing units and over 3,400 military structures and facilities

located throughout the entire reservation. All utilities, security protection, fire protection, and all maintenance of roads, building, structures, and grounds are provided and administered by this unit. All materials and supplies are requisitioned, received and distributed by Marine Corps Base. Under the jurisdiction of the Department of Health, Education and Welfare, Marine Corps Base administers the public school system at Camp Lejeune which has an annual enrollment of approximately 4,200 pupils.

The Service Support Schools conduct courses of training, supply, food service, and motor transport. The Combat Service Support School (the Engineer School) conducts training in all types of combat support functions.

b. SECOND MARINE DIVISION

(1) Mission

To execute amphibious assault operations and such operations as may be directed, supported by Marine Aviation, Force Troops units, and Naval Forces.

(2) Function

The Second Marine Division is basically an infantry division and the major portion of the Marine Corps East Coast force in readiness. There are three infantry regiments, one artillery regiment, and eight separate battalions that make up the Second Division. These units may be organized into various types of teams depending on the combat mission requirements. Specialized training with complex weapons and equipment is coordinated with counter-guerrilla warfare training and amphibious assault operations. The separate battalions are trained to provide specialized support essential to maintaining the prime objective of the Division assignment. Constant training and deployment to all types of climates are continually providing a well-trained unit even in face of the rapid turnovers caused by the enlistment and draft situation. In times of international conflict, it is conceived that the entire Division would be mobilized as one unit with no permanent cadre to remain at Lejeune.

c. FORCE TROOPS

(1) Mission

To command, administer, and train assigned units in order to provide combat service and technical support as required by Headquarters FMFLANT and its subordinate command in the accomplishment of a mission assigned.

(2) Function

As a part of the Fleet Marine Force, Atlantic, Force Troops constitutes the major source of heavy combat support and specialized technical support assignable to a mobilized combat unit such as the Second Marine Division. In addition to heavy combat support operations by field artillery groups or tank battalions, there are combat service support battalions and technical and specialized support groups that are equipped for quick mobility to give logistical and fire power support to other basic Marine units.

A major sub-command of Force Troops is the Second Force Service Regiment which provides Third and Fourth Echelon maintenance for a number of units in addition to Force Troops. These other units include Marine Corps Base, the Second Marine Division, the Second Marine Aircraft Wing at Cherry Point, North Carolina, and other smaller commands that may be assigned to this general vicinity.

d. U. S. NAVAL HOSPITAL

This Hospital provides medical services for all assigned Military personnel and their dependents at Camp Lejeune. The Hospital personnel, and Hospital improvements are completely independent of the other operations at Lejeune. The Public Works Office of Marine Corps Base does provide maintenance support to the Hospital under their O & M Program. During war time conditions, the Hospital has accommodated up to 2,200 patients and is currently operated as a basic 500-bed Hospital. Service and dependent housing is handled by Marine Corps Base similar to other tenant commands at Lejeune.

e. FIELD MEDICAL SERVICE SCHOOL

This is a Navy unit organized for the training of Navy personnel for combat zone medical assistance. The unit is completely dependent upon the Marine Corps Base for all its operational support; however, its academic and logistical support is provided by Navy facilities elsewhere. This unit conducts field training in and around the Camp Lejeune training area in the area of training personnel for combat duty.

f. BASE LOADING

Military and civilian population projections are based on activities and sponsors input into the Camp Lejeune Master Plan. This data reflects Military and civilian strength for the Fiscal Year of 1969. The 1969 base loading summary indicates the following breakdown:

BASE LOADING SUMMARY

U. S. MARINE CORPS BASE	PERSONNEL				
	MILITARY		CIVILIAN		OTHER
	OFF.	E.M.	GRADED	UNGRADED	(EXCHANGE SERVICE CL)
<u>HADNOT POINT</u>					
BASE TROOPS	122	1,157	942	942	1,783
USN	45	123			
WOMEN MARINES	18	210			
NAVAL MEDICAL RESEARCH	13	16	37	14	
MEF HQ.	57	96			
SUBTOTAL	255	1,602	979	1,707	1,783
<u>MONTFORD POINT</u>					
SUPPLY SCHOOL (PERMANENT)	51	370	7		
SUPPLY SCHOOL (STUDENTS)	51	601			
FIELD MEDICAL SERVICE SCHOOL (PERMANENT)		9			
FIELD MEDICAL SERVICE SCHOOL (STUDENTS)	30	125			
FIELD MEDICAL SERVICE SCHOOL (USN)	4	21			
SUBTOTAL	136	1,126	7		
<u>CAMP GEIGER</u>					
1 ST INFANTRY TRAINING REGIMENT (PERMANENT)	39	323			
1 ST INFANTRY TRAINING REGIMENT (STUDENTS)		3,850			
SUBTOTAL	39	4,173			
<u>RIFLE RANGE</u>					
STAFF	4	124			
SUBTOTAL	4	124			
<u>COURTHOUSE BAY</u>					
ENGINEER SCHOOL (PERMANENT)	21	225			
ENGINEER SCHOOL (STUDENTS)	20	350			
SUBTOTAL	41	575			
TOTALS	475	7,600	986	1,707	1,783

2ND MARINE DIVISION PERSONNEL LOADING

2ND MARINE DIVISION	PERSONNEL				
	MILITARY		CIVILIAN		OTHER
HADNOT POINT					
2ND MARINES REG.	140	3,360			
6TH MARINES REG.	140	3,360			
8TH MARINES REG.	140	3,360			
10TH MARINES REG.	169	2,345			
HQ. BN.	127	1,012			
2ND SERV. BN.	62	955			
2ND MED. BN.	11	115			
2ND M.T. BN.	17	252			
2ND SHORE PARTY BN.	28	406			
2ND ENGR. BN.	30	662			
2ND ANTI TANK BN.	29	319			
2ND RECON. BN.	28	404			
USN	101	668			
TOTAL	1,022	17,218			

FORCE TROOPS PERSONNEL LOADING

FORCE TROOPS COMMAND	PERSONNEL			
	MILITARY		CIVILIAN	
	OFF	E.M.	GRADED	UNGRADED
<u>FRENCH CREEK</u>				
2ND FSR	134	2,572		
HEADQUARTERS CO.	34	144		
8TH COMMUNICATION BN.	36	680		
2ND AIR & NAVAL GUN-LIAISON CO.	31	305		
HQ. BTRY. 2ND FIELD ARTY. GP.	17	110		
155 MM GUN BTRY.	6	136		
2ND 155 MM GUN BTRY.	6	137		
2ND 8" HOWITZER BTRY.	10	194		
TANK CO. (90MM)	5	97		
2ND TANK BN.	36	600		
2ND FORCE RECONNAISSANCE CO.	10	140		
8TH ENGINEER BN.	40	1,010		
2ND BRIDGE CO.	6	163		
2ND TOPOGRAPHIC CO.	6	90		
8TH MOTOR TRANSPORT BN.	20	343		
2ND SEPARATE SURGICAL CO.	-	8		
2ND HOSPITAL CO.	-	27		
2ND COUNTERINTELLIGENCE TM.	5	11		
4TH COUNTERINTELLIGENCE TM.	5	11		
2ND INTERROGATION - TRANSL. TM.	4	7		
4TH INTERROGATION - TRANSL. TM.	4	7		
6TH INTERROGATION - TRANSL. TM.	4	7		
5TH SECURITY COMMUNICATION TM.	1	5		
2ND RADIO BN.	34	378		
USN	39	150		
4TH DENTAL CO. (MARINE)	-	3		
2ND DENTAL CO. (MARINE)	-	3		
SUBTOTAL	493	7,338		
<u>MILE HAMMOCK BAY</u>				
2ND AMPHIBIAN TRACTOR BN.	34	873		
SUBTOTAL	34	873		
TOTALS	527	8,211		

MARINE CORPS ENGINEER SCHOOL

RECOMMENDED SCHEDULE FY-1969

SUMMARY OF FY-1969 ACADEMIC PROGRAM

COURSE TITLE	NO. OF CLASSES	COURSE LENGTH (WEEKS)	NO. OF STUDENTS
COMBAT ENGINEER OFFICER	6	6	123
UTILITIES OFFICER	1	9	18
ENGINEER EQUIPMENT OFFICER	2	7	29
COMBAT ENGINEER (ADV.)	2	13	42
UTILITIES CHIEF	1	17	15
ENGINEER EQUIPMENT CHIEF	2	12	21
BASIC ELECTRICIAN	22	7	458
ADVANCED ELECTRICIAN	2	13	30
REFRIGERATION MECHANIC	11	8	186
PLUMBING & WATER SUPPLYMAN	19	8	404
BASIC METALWORKER	16	5	238
ENGINEER EQUIPMENT MECHANIC	50	6	1,058
ENGINEER EQUIPMENT OPERATOR	28	5	726
COMBAT ENGINEER BASIC SPECIALIST	85	4	2,734
SHORE PARTY BASIC SPECIALIST	10	4	338
BASIC FREIGHT OPERATIONS COURSE	35	-	524
TOTAL	292		6,944

FY-1970 PROGRAM IS ESSENTIALLY SIMILAR TO
FY-1969 WITH A TOTAL LOAD OF 164 OFFICERS
AND 6575 ENLISTED STUDENTS.

AREA BASE LOADING SUMMARY

AREA LOCATION	STAFF			STUD. TRAINEES			TOTAL
	OFF.	E.M.	CIV.	OFF.	E.M.	CIV.	
HADNOT POINT	1,411	21,392	4,469	-	-	-	27,272
FRENCH CREEK	359	4,766	-	-	-	-	5,125
MONTFORD POINT	55	400	7	81	726	-	1,269
CAMP GEIGER	39	323	-	-	3,850	-	4,212
RIFLE RANGE	4	124	-	40*	782*	-	950
COURTHOUSE BAY	55	1,098	-	20	350	-	1,523
BASEWIDE/MISC	-	-	-	-	-	-	-
U.S.N. HOSPITAL	115	264	694	-	60	-	1,133
TOTAL	2,038	28,367	5,170	141	5,768	-	41,484

* NOTE: THESE PERSONNEL ARE INCLUDED IN VARIOUS OTHER AREAS FOR PERMANENT HOUSING, MESSING, ETC. AND ARE INCLUDED HERE ONLY FOR PURPOSES OF SHOWING STUDENT LOAD.

6. GEOGRAPHICAL AREAS

Outlined in Section 4b - Activities and Land Allocation, were established years ago as the method for distinguishing the six specific geographical sites on the Base, and the one general (Basewide and Miscellaneous) area which includes all low density areas and all Base utilities (Category Codes 800 Series and 900 Series). The topographic boundaries of these areas are maintained within this current Master Plan, and an additional area was added as the result of the planning that was completed.

The U. S. Naval Hospital, Camp Lejeune, being entirely separate from the Marine Corps planning system, is outlined as a separate autonomous unit, thus creating a geographical area heretofore and not included in the Marine Corps system.

7. SOCIAL, CULTURAL, AND RECREATIONAL FACILITIES

As with any Military installation, there is a distinct separation between the social, cultural, and recreational activities of the Armed Services and those of the neighboring civilian population. Although the Military Service personnel contribute greatly to the demand on, and the support of, local activities, there appears to be no pattern of predictable unity between the civilian and Military functions. A distinct physical tie between the Marine Corps Base and the City of Jacksonville is the New River which could provide an excellent catalyst uniting the recreational activities of the Military and civilian population.

For social activities on the Base, 18 Service Clubs, both Officers' and enlisted, are located throughout the Base. These service clubs provide the primary social tie between Military personnel and their dependents within the Marine Corps and Navy personnel.

For cultural activities, the principal emphasis has been on adequate religious programs as conducted by the Church denominations which represent each of the major religions. There are 6 Chapels on the Base which conduct services in all of the principal religions.

Recreational facilities are both plentiful and varied. There are 2 golf courses, 72 athletic fields, 44 playing courts, and a 32-lane bowling alley. In addition, hobby shops, libraries, boating facilities, family picnic areas, beach recreational areas, and organized hunting and fishing activities are operated and administered by Marine Corps Base. With a 2,000-seat theater in the Hadnot Point area, a drive-in theater, and smaller movie theaters in each of the other major geographical areas, all phases of recreational activities envisioned in this part of the country are well represented.

Along the Atlantic Coast, Onslow Beach provides excellent facilities which are well used by the Marine Corps. Due to the quick accessibility to all parts of the Base, Onslow Beach has been in the demand during the summer months and most of the cottages in this area are booked well in advance.

The City of Jacksonville has recently conducted a study for the future development of the town and this will hopefully conclude in the establishment of additional social, cultural and recreational facilities of a high caliber and of significant appeal to the Service personnel.

8. HISTORY

In 1940 at the outbreak of World War II, the Marine Corps needed to establish an amphibious training facility on the East Coast. 170 square miles of farm land which surrounded the New River and included 11 miles of coast line, was purchased in 1941 and accelerated plans were made to establish a training Base on this site.

For over 200 years prior to purchase by the U. S. Government, this area had been used exclusively for farming and timber growth, with a great deal of the coastal land completely unusable due to the tidal marshes.

The ground on the east side of the river several miles below Jacksonville, was high, rich soil with a commanding view of the river, and with the advantage of the prevailing breezes from across the water. On this site stood the original home of the land owners. This is the present location of Hadnot Point.

In April of 1941, construction began on the area in Hadnot Point on the basis of a Master Plan, which apparently long since has been destroyed or misplaced. As evidenced by the excellent use of the buildable land, with maximum advantage taken of the terrain, the original development at Hadnot Point began in such a manner that the present siting of major functions is still valid today. Only the technological advances in Military weapons and equipment, with their resultant effect on the organizational pattern of troop units, has created the crowded situation at Hadnot Point that exists today. In subsequent years, the rapid expansion of industrial facilities has far out-gained the need for rapid expansion on other areas in the Base, thereby creating a congestion of maintenance and industrial facilities that led to the request for the creation of this Master Planning.

Of the total capital investment in site improvement, structures, and buildings at Lejeune, the large majority of work was accomplished in 1941, 1942 and 1943. Toward the close of World War II, Camp Lejeune was established as the home of a Marine Division on a permanent basis thus utilizing, to maximum potential, the new (early 1940's) construction of the Base.

Between 1941 and 1945, construction was completed at Montford Point, Camp Geiger, and at Courthouse Bay. Montford Point was originally designed for the basic tactical training of all Negro troops. Although the construction of buildings at Montford Point was for semi-permanent and permanent buildings, this area did not contain the provisions for specialized training facilities for which this area has been used in recent years. Because of the planned isolation of this unit, community facilities were established within this geographical area with a minimum of dependence upon the Base (Mainside) for social, recreational, and tactical support. Over the past several years, the maintenance program at Montford Point has been diminished and all of the facilities at present are being utilized for the Marine Corps Service Support Schools and a few isolated functions such as the NCO Leadership School operated by the Second Marine Division.

The Camp Geiger area was established as the location of primary unit tactical training for recent recruits from the Parris Island basic training complex. Because of the pressure of the war effort, the buildings in the Geiger area were both temporary in nature, and subject to a minimum of maintenance once the Armistice was signed.

In subsequent years, the Marine Corps Combat Service Support Schools (the Engineer School) was located on the edge of Courthouse Bay. This provided excellent amphibious training sites for the Engineer students and has been utilized to good advantage until this day.

The area now designated as Paradise Point (exclusive from this Study) was established for family housing for commissioned personnel. Subsequently, Tarawa Terrace, Midway Park and other non-commissioned housing was established.

Generally, the Master Plan of the early 1940's resulted in an orderly layout which is still valid today. The increase in supporting facilities for the troop units, and resultant housing for these additional units, has formed the largest single problem on the Base.

D. EXISTING INSTALLATION

1. EXISTING LAND USE

Since each of the separate geographical areas conduct training with personnel billeted within that particular area, each of the separate areas contains some portion of land designated for all of the prime land use functions set forth by the Navy. In many of these cases, the land use for a small function, such as administrative offices, might consist of only one building adjacent to both community facilities, billeting and training areas. Part III includes land use maps for each of the separate areas as well as for the entire Base. Within the present six major geographical areas (excluding Basewide), the current use of land has generally followed the concepts established in the original planning for the Base. In some cases, however, such as at Hadnot Point, the creation of new units, and the demand for physical facilities, has caused the existing land use maps to appear as kaleidoscopes. Of primary importance in the execution of this plan was not the existing use to which the buildings were placed, but the correlation of the designed use and capabilities of these structures with the optimum land use projected at this time.

An example of the temporary nature of the confused land use occurs in the maintenance and industrial section at Hadnot Point where billeting, storage, community facilities, and secondary operations of Marine Corps Base were being conducted in buildings that were originally designed for warehouse or industrial use. By selective shuffling of operations, maximum potential of each area can be realized.

2. COMMAND DISPERSMENT

As indicated in the preceding text, the immediate requirements of units outstrip the ability of the Marine Corps to build permanent facilities to house these individual functions. Since some vacant buildings were existing, it proved much more expedient to locate these units in any available space than to secure Congressional approval for the permanent facilities needed. This has led to a dispersment of some units over a wide portion of geographical area, and in some cases to be located at more than one area.

By design, some of the major Commands at Lejeune have been dispersed to more than one identified area. These are outlined as follows:

a. MARINE CORPS BASE

Marine Corps Base, as the "housekeeping" activity of Lejeune, operates all of the physical facilities, and training facilities for itself and all tenant commands. Due to the nature of their jurisdiction, there is some involvement by Marine Corps Base in each of the geographical areas. Generally, Marine Corps Base is quartered at Hadnot Point and administers their work from that location. The Marine Corps Service Support School at Montford Point, the Marine Corps Combat Support School at Courthouse Bay, the Infantry Training Regiment at Camp Geiger, the detachment of cadre personnel operating the requalifying ranges at Rifle Range, the operation of Onslow Beach recreational facilities, all of the training areas that are contained in the Basewide area, and all housing at Paradise Point fall under the administration of Marine Corps Base.

b. SECOND MARINE DIVISION

This Division is now located exclusively at Hadnot Point, billeted between the main service road and New River, with industrial functions centered east of the billeting areas. The NCO Leadership School at Montford Point (operated by the Second Marine Division) remains outside the Hadnot Point area.

c. FORCE TROOPS

As a "stepchild", interspersed among the Second Marine Division areas and superimposed over Marine Corps Base, Force Troops has had no identity until recently. In the latter part of the 1960's, the area between Cogdels Creek and French Creek became known as French Creek, established as a basic geographical area, and as the home for Force Troops. Force Troops still has some of their storage facilities in the Camp Geiger and Hadnot Point areas, and several years will be required before the transition is complete.

d. U. S. NAVAL HOSPITAL

Located on a peninsula west of Hadnot Point, the Hospital is ideally separated from other parts of the Base, and at the same time, provides quick access to the major billeting and housing areas on the Base. The existing dispersement of this Command is concentrated and ideal.

e. FIELD MEDICAL SCHOOL

As a small unit working somewhat autonomously, this School was located in the available facilities at Montford Point, remote from any essential relationship to the other Commands. This unit requires a small amount of permanent buildings, and some minimum undeveloped outside training areas for their activities. The unit could be as well situated as any part of the Base except for some administrative support from Marine Corps Base.

E. PLANNING ANALYSIS

1. PREREQUISITES

Certain prerequisites of planning were established and analyzed prior to the development of the Master Plan in order to validate absolute Military construction program line items and to insure maximum utilization of existing and future assets. A comprehensive analysis of mission, facility requirements, existing assets, and existing general land use was conducted to determine the major problems.

a. MISSION AND FUNCTION

The mission and function of each Command and how they relate to the total operation of the Base was determined through interviews with Principals of each Command.

b. FACILITY REQUIREMENTS

Basic Facility Requirements Lists (OPNAV Form 11000-1) for each major area that were prepared by the Activity and were used as the basis for this Study. A copy of these documents is included in Part II of this Report.

c. EXISTING ASSETS

Evaluation of existing Shore Facility Assets (NAVMC Form 10651) prepared by the Activity, were compared and analyzed by conducting on-site reviews of existing facilities. The condition and utilization of the buildings in each area were evaluated and noted changes and/or corrections are reflected in the 10651 Forms which are included in Part II of this Report.

d. EXISTING GENERAL LAND USE

From data gathered during on-site reviews and interviews, existing Land Use Plans were developed to show the relative location of specific functions and Commands. Maps which are included in Part III, were prepared to illustrate the degree to which unrelated and incompatible functions are intermingled at the present time. Existing problems due to changing requirements were also noted and compared with the original design concept of the Base to determine how much of the design concept is still valid.

2. EXISTING MAJOR PROBLEMS.

To be very objective, it was necessary to determine the cause and effect of the immediate problems as they relate to the other prerequisites above. The major problems to be resolved are as follows:

- a. Scattered units of Commands.
- b. Deficiencies in Bachelor Housing accommodations.
- c. High percentage of existing facilities that are inadequate or sub-standard.
- d. Inefficiencies due to condition and location of facilities.
- e. Separation of the Base by New River.
- f. Traffic problems at Hadnot Point.
- g. High operational costs.
- h. Duplication of facilities.
- i. High turnover of personnel.
- j. Deficiencies due to changing criteria and technological improvements.

3. AREA ANALYSIS

An analysis of the problems to be resolved in each area follows:

a. HADNOT POINT

Hadnot Point was planned as the Major Command Center for Camp Lejeune with accommodations and support facilities for the Second Marine Division and the Staff Command for the Marine Corps Base. In later years, units of the Force Troops, Fleet Marine Force were superimposed into the area and resulted in scattering of the Commands and overcrowding of facilities. Modern facilities built 25 years ago, although in good condition due to excellent maintenance, are now sub-standard due to new criteria. Technological changes in armament and equipment plus temporary maintenance facilities have also resulted in operational inefficiencies. The increased number of privately owned vehicles

and increased travel on the Base have resulted in the overcrowding of a well planned road network and the subsequent traffic congestion is the result.

Much of the original planning at Hadnot Point is still valid and the battalion and regimental area complex should be retained. Permanent structures that are structurally sound should be retained and utilized for their designed use where possible. Temporary buildings and others beyond economic repair should be torn down and replaced with modern facilities.

Planning recommendations are proposed to overcome these problems and deficiencies.

b. FRENCH CREEK

The French Creek area is presently being developed for the Force Troops, Fleet Marine Force Command. The present basic design concept and the limited building sites, due to low areas and explosive quantity distances from the Magazine area, limits future expansion in the area and needs to be carefully studied. Consolidation of the Second Force Service Regiment in the area was not originally planned, but is now requested by the Base. The functional relationship of the Force Troops with the other Commands indicates the French Creek area development to be ideal; however, a full range of community support facilities will need to be provided in order for this area to be totally adequate as a Command area. Adequate space for expansion of all facilities should be provided because of the growth potential of this specialized Command.

c. MONTFORD POINT

Montford Point is geographically isolated from other basic functions and the area is not suitable for most training operations because of the close proximity to the City of Jacksonville. The condition of the majority of the buildings in the area is poor and rehabilitation is not economically feasible. Operation of the present Service Support Schools in the existing facilities is not efficient and morale of the students is considered poor. Although the area is considered suitable for academic training, the existing facilities are not suitable. The problems associated with this area can be resolved by combining all Service School functions in one area and this will eliminate the need for the duplication of community facilities now operated in two areas.

As is, Montford Point is most suitable as a Marine Reserve Training area or for emergency housing to handle ITR overflow.

d. CAMP GEIGER

Isolation imposed by New River makes Camp Geiger ideal for the basic Combat Infantry Training which is conducted at Camp Lejeune. However, the generally poor condition of the existing facilities has made it necessary to improve housing and training facilities in this area in order for the training to be totally effective. The 1st Increment of new Troop housing for Camp Geiger has been funded. There is a need to complete the planned development of this area and build the community support facilities that are required to self-sustain the west side of New River and make it independent from an operational standpoint.

e. RIFLE RANGE

The present use of the Rifle Range area is for rifle requalification of all Marines at Camp Lejeune. The practice of billeting personnel for a two-week period, at the Rifle Range for requalification, while effective in terms of qualification scores, is nevertheless expensive to maintain due to the duplication of housing and support facilities. The area is isolated, the ranges are well established, and the existing facilities are in good repair. The Marine Corps has attempted concentrated sections of requalification which could lead to a reorganization of the entire principle of the two-week isolation now in effect. It has been recommended during this Study that this policy be evaluated as soon as possible to determine if the existence of Rifle Range is really justified. The duplication in billeting, community facilities, administrative and messing facilities raises serious doubts as to its operational efficiency. The travel distance between the major billeting areas at Hadnot Point and Rifle Range prevents the daily transportation of requalifying personnel because of the policy of beginning range work at dawn to achieve the best scoring results. New known distance ranges could be provided much closer to the center of major billeting (Hadnot Point) and it would be no longer economical to maintain the facilities at Rifle Range. The Activity has indicated a reluctance to change policy on the basis that the isolation caused from separating these personnel from their normal routine, is highly beneficial to their training. On this basis, Rifle Range was maintained in this Master Plan.

If, in the near future, events lead to the disbanding of the isolation requirement, this entire area can be put to other uses. Future development of the area depends upon the justification of some other isolated functional requirements. In the meanwhile, little or no capital improvements in this area are recommended.

f. BASEWIDE AND MISCELLANEOUS

The only problems associated with the Basewide and Miscellaneous areas of Camp Lejeune are utility deficiencies and traffic congestion at the Main Gate. Proposed recommendations will resolve these problems. Land in the undeveloped areas of the Base is well organized with ranges, mock-ups and trails for training and maneuver operations. Future Land Use Plans for the Onslow Beach and Mile Hammock Bay areas are outlined in the proposed recommendations.

g. COURTHOUSE BAY

Present problems in the Courthouse Bay area stem from the fact that the Second Amtrac Battalion and Second Anglico have been interspersed in the area with the Combat Engineers School and there is a lack of adequate facilities. As a result, existing housing facilities are overcrowded and personnel have to be billeted in temporary Quonset housing. Most of the supporting facilities used by Second Amtrac Battalion and Second Anglico are also temporary buildings. The only recent new construction in the area has been for Engineers School Applied Instruction Training facilities. Combining the Engineers School with other Troop functions results in some conflict of purpose, and while not a serious problem, the conflict should still be resolved. The geographical location of Courthouse Bay is perhaps best suited for school training functions, and future developments of the area should be toward improving the area exclusively for Academic and Applied Training Activities.

4. CONCLUSIONS

- a. The original planning of the Hadnot Point area was excellent and that much of the planning concept is still valid and should be retained.
- b. The problems created by interspersed units of Commands should be resolved by reestablishing functional Command areas.

PROPOSED AREA BASE LOADING SUMMARY

AREA LOCATION	STAFF			STUD. TRAINEES			TOTAL
	OFF.	E.M.	CIV.	OFF.	E.M.	CIV.	
HADNOT POINT	1,281	18,850	4,476	30	125	-	24,762
FRENCH CREEK	493	7,338	-	-	-	-	7,831
MONTFORD POINT	-	-	-	-	-	-	-
CAMP GEIGER	39	323	-	-	3,850	-	4,212
RIFLE RANGE	4	124	-	40*	782*	-	950
COURTHOUSE BAY	72	595	7	71	951	-	1,696
BASEWIDE MISC.	-	-	-	-	-	-	-
USN HOSPITAL	115	264	694	-	60	-	1,133
MILE HAMMOCK BAY	34	873	-	-	-	-	907
TOTAL	2,038	28,367	5,177	141	5,768	-	41,491

* NOTE: THESE PERSONNEL ARE INCLUDED IN VARIOUS OTHER AREAS FOR PERMANENT HOUSING, MESSING, ETC. AND ARE INCLUDED HERE ONLY FOR PURPOSES OF SHOWING STUDENT LOAD. BILLETING FACILITIES MUST BE PROVIDED FOR ALL STUDENTS.

- c. Consolidating functions to reduce operating expenses and to eliminate the duplication of facilities should be a determining factor in future planning.
- d. Design larger complexes for existing deficiencies to improve efficiency of operation.

The recommendations of the plan of development which follows are based upon the conclusions which were drawn from the analysis of the problems and the changing requirements of present operation.

F. MASTER PLAN DEVELOPMENT

The objective of this Master Plan was to relate the overall operational needs of the Activities to the maximum potential of the lands and existing capital investment buildings, structures, and utilities. Upon resolving the purposes to which each physical asset was best suited, line items of programmed construction were organized into a systematic schedule of fiscal programming. Rather than to begin with what improvements might be necessary with the existing situation, a broad study of the overall siting needs of the Activities was made. Simultaneously, the prime assets and deficiencies for each of the built-up areas of the Base were outlined so that a realistic comparison could be made of optimum conditions with the existing investment.

Upon completion of this broad investigation of land use potential and unit needs, it was concluded that a majority of the prime functions being administered at Camp Lejeune were, in fact, properly sited. Those areas where basic facility requirements did not correlate to maximum utilization of the land and its improvements were studied in further detail to determine the proper location for these particular units. Based on these studies involving both capital and operational economies, certain specific changes were recommended to the CMC for concurrence. Upon approval of the overall concepts, the specific planning began.

The only major proposal not accepted by CMC was the discontinuation of the operations at Rifle Range. A more detailed outline of this particular situation was given in the preceding section.

Once the major concepts were approved, the planning took the form of identifying the specific deficiencies and accesses that either existed or were created by the overall concept, and balancing these needs and available facilities for maximum utilization of existing assets. Where this balance did not completely satisfy the operational needs, fiscal year programming of new construction was suggested.

1. DEFICIENCIES AND EXCESSES

Basic Facilities Requirement Listing and inventories of existing assets were compiled by the Activity for use in this Plan. An analysis of requirements and assets was made to determine the excesses and deficiencies for each category code listing. This comparison was made on each major area of the Base, and on the

overall assets of the Base, and the results were evaluated as the basis for future planning recommendations. Facility deficiencies and excesses (OPNAV Form 11000-3) summaries are presented in Part II of this Report.

Subsequent to the initiation of this Master Plan, LANDIV initiated a separate Contract to outline those particular requirements of the Marine Corps not sufficiently covered in the basic Navy planning guides (NAVFAC P-80). This investigation was not completed in time to incorporate this new rationale within the scope of this Report. It is assumed that the annual up-dating of this broad planning will be able to take advantage of whatever findings were made under this separate Study.

2. SATISFACTION OF FACILITY DEFICIENCIES

The major part of the existing facilities were built prior to 1945 and many of the buildings are listed as sub-standard due to needed improvements and/or the lack of air conditioning. To achieve maximum utilization of available assets, the buildings were evaluated to determine if rehabilitation is economically feasible to retain the buildings for the intended design use. Consideration was given to consolidation of functions to reduce operating expense and to improve operations. New construction has been recommended only when there were no economically or operationally acceptable alternatives. A line item summary for Correction of Facility Deficiencies (OPNAV Form 11000-4) has been prepared for each major area of the Base and are included in Part II of this Study. Military Construction Line Item data (DD Form 1391) has been included for each new construction item proposed in the 5-year program. Detailed Facility Studies (DD Form 1391c) have been prepared for the essential line items proposed for the initial fiscal years. These studies, and the general development maps included in Part III of this Study, identify the proposed siting for these facilities. The general development maps include the siting for all major items of construction proposed in the entire 5-year program.

3. DISPOSITION OF EXCESSES

Utilization of existing assets is essential if the facility can be made to serve some useful purpose. The Excess Facilities Summary (OPNAV Form 11000-5) lists the buildings that are declared excess because of sub-standard conditions, obsolescence

of functional inadequacy, the majority of which are of temporary or semi-permanent construction, and they have exceeded their useful life expectancy. Recommended disposition for each building declared excess is indicated on the summary and all buildings and structures recommended for demolition are appropriately shown on the general development maps in Part III.

In the initial planning studies, it was recommended that the land west of New River and north of Sneads Ferry to Stone Gray Road, might not be needed to conduct the training essential to the Marine Corps program. This was predicated on the assumption that Rifle Range would be discontinued and known distance requalification ranges would be located nearer Hadnot Point, east of New River. In view of the Activities' stated needs for the continuation of Rifle Range as an isolated area, and the recent completion of guerrilla training areas south of the ranges, it was concluded that this land would not be suitable for excessing.

After the major concepts were proposed to CMC, some consideration was given to excessing all or part of the area known as Montford Point. This area is physically isolated from the remainder of the reservation by New River and the only access to the area is basically through the edge of the City of Jacksonville. In view of the present investment in this area, it is now recommended that this area be retained for overflow purposes until further detailed study reveals the maximum value of this area to the Marine Corps or other Government services.

4. MAJOR RECOMMENDATIONS

The major steps proposed for the overall development of Camp Lejeune follow. In the case of each recommendation, alternate solutions were evaluated both in terms of capital and operational costs, as well as overall improvements in the efficiency of each Activity to conduct its specific mission. Some of the recommendations are general in nature and have a proportionate advantage to each Activity according to its size and needs.

- a. COMBINE THE MARINE CORPS SERVICE SUPPORT SCHOOL WITH THE COMBAT SUPPORT SCHOOL AT COURTHOUSE BAY.

At present, the Service Support School is located in the Montford Point area under a separate area Commander, responsible to Marine Corps Base. The facilities in

this area are in generally poor condition and inadequate for the current, or other programmed use. Rehabilitation is not economically feasible for the majority of the buildings. Geographically isolated from the remainder of the Base, Montford Point contains approximately 1,600 acres. The size and forestation of this area, restricts its value to the Marine Corps for any type of Combat training area. The proximity to the City of Jacksonville rules out its use as a tactical training area.

The combining of all Marine Corps Service Support School functions and Combat Support School functions into one area will drastically reduce the operational, security, and capital improvement cost. Entirely dependent upon Marine Corps Base for all logistical support (such as messing supplies, utilities, security, adequate community facilities), the loading of Montford Point does not justify its retention.

Several locations were reviewed as a possible site for the combined Schools. Courthouse Bay provides the best siting due to the condition of the present investment in buildings, structures, and utilities. Further, Courthouse Bay is more readily accessible to the other major areas of the Base for essential daily support functions.

The elimination of the duplicate facilities in two School sites offers obvious financial and administrative benefits. Sufficient training areas exist in and around Courthouse Bay to conduct both ground and amphibious training.

Administratively, this relocation at Courthouse Bay would place all of the Schools now under jurisdiction of Marine Corps Base, under one area Commander. At Courthouse Bay, academic, general instruction, and applied instruction can be conducted by each School without major conflicts. The variation in student housing demands can best be handled in one larger area where the diversity factor can be utilized.

b. MOVE SECOND AMTRAC BATTALION TO MILE HAMMOCK BAY.

Amphibious training and landing operations form the major requirement of this Unit. Presently at Courthouse Bay, the training areas are remote from the billeting and administration areas, resulting in a sizable loss of efficiency for routine training. The present facilities at Courthouse Bay are inadequate for this Unit.

Based on statistics provided by the Activity, a simple comparison of projected operational cost shows the need for locating the Second Amtrac Battalion as near to the ocean as possible. In view of the inadequate training and berthing facilities along the ocean, the operational savings in transporting these Amtracs to the ocean form the prime criteria for relocating this unit.

Mile Hammock Bay, with access directly into the water from an existing loading ramp, offers the preferred siting for this particular unit. This will also free-up the existing buildings at Courthouse Bay for proposed use by the Service Support School, and in particular, the Motor Transport School.

c. DEVELOP STAFF NCO HOUSING AT HADNOT POINT.

The Activity requested that Staff NCO billeting be provided separate from the EM billeting and in one complex serving both the units at Hadnot Point and French Creek. Selecting the proper siting for this complex, and the phasing required to coordinate this construction within the proposed rehabilitation of the existing billeting, was the major emphasis of this particular item.

The Activity determined that Bachelor Housing for Grades E-6 through E-9 would be separate from the billeting for Grades E-5 and below. With Grades E-5 remaining with the unit billeting, this retains sufficient leadership with the individual units and at the same time, worked in quite well with the available rooms in the existing Barracks.

Because of the high rate of ownership and use of privately owned vehicles, particularly among the higher pay grades, the siting for the NCO Complex would not be critical in terms of pedestrian travel. Furthermore, it is desirable to provide a certain amount of remoteness to the Staff NCO Housing in order to give separate identity to this complex. With Commissioned Officers housed in Paradise Point, some area between the major billeting at Hadnot Point and the Paradise Point area seemed to be ideal. Such an area was located to the northeast of Main Service Road between Beaver Dam Creek and Wallace Creek. Wallace Creek thus remains the dividing line between Enlisted billeting and Commissioned Officers' billeting.

With the separate Staff NCO billeting, other ancillary facilities such as an EM Club, and recreational facilities will be included. Within this complex, also will be a large amount of offstreet parking that is not feasible for some of the older areas of the Base.

- d. EXPAND THE BILLETING AT HADNOT POINT WITHIN THE BOUNDARIES OF THE FIVE EXISTING REGIMENTAL AREAS AND THE PRESENT BILLETING AREA FOR MARINE CORPS BASE.

Upon the initial development of Hadnot Point, five Regimental areas were established along New River taking advantage of the existing topography. Over the years, this concept of the five Regimental areas has been maintained in principle with few, if any, violations. The separation between the areas is both natural in topography and accentuated by natural forestation. Within these buffers are the recreational facilities convenient to the billeting areas.

Under the new DOD Criteria for Billeting contained in OPNAVINST 11012.2a dated 8 September 1967, the three-man room requirement was applied to the billeting at Camp Lejeune. This requirement formed the largest single influence on the planning of Hadnot Point due to its broad impact on the existing facilities. Even though subsequent conferences have indicated the three-man room criteria may not remain valid, all of the work that was in this Master Plan has been based on that criteria.

The existing barracks at Lejeune, and in particular the five Regimental areas at Hadnot Point, were largely built in the early 1940's. These are open-bay type barracks, two-story in height, of permanent construction with gang toilets. A complete separate phase of the Master Plan was conducted in the initial months to determine if the expansion of billeting at Hadnot Point would require the space then anticipated for the industrial area for the Second Marine Division. Phase I of this Master Plan, together with the supplement, established that the Division industrial area could remain as planned and that billeting could be expanded within the existing sites.

The Activity has already initiated a program of rehabilitating the toilets and showers in the existing permanent barracks at Hadnot Point. This program was nearly complete

when the Master Plan was initiated. With the large investment in initial construction, together with the recent expenditures for rehabilitation of toilets and showers, no justification existed for abandoning the existing buildings. To the contrary, these buildings were well adapted to division and needs to three-man rooms. (It is pointed out here that the division of the existing barracks into three-man rooms create spaces which, although not within the net square footage requirements, are nonetheless sufficient as four-man rooms. This is due to the particular configuration and shape of the rooms and is emphasized at this point as a matter of background should the criteria for room size ever be modified.) With the rehabilitation of existing barracks into three-man rooms, there is a remaining need for a considerable amount of additional billeting space, even after the Staff NCO's (E-6 through E-9) have been relocated to a new housing complex.

The prime consideration in the design of these facilities were: The addition of large buildings to realize the most economical manner of new construction, the unit integrity of the company size units and subsequent relationships to Battalion organization, the retention of vistas created in the original Master Plan, and a logical program of construction which would not create undue problems of multiple occupancy or frequent shifting of personnel during the several years required to complete the program. As this one item involved more capital expenditure than many other aspects of the Base in aggregate, a considerable investigation into the timing was made prior to development of the plan illustrated in Part III.

e. DEVELOP AN INDUSTRIAL COMPLEX SERVING HADNOT POINT AND FRENCH CREEK.

Maximum efficiency can be obtained by grouping like functions within a convenient area. The central location of all maintenance facilities to form a complex, with the billeting areas of the separate Commands located around the perimeter of the area, offers maximum convenience for functional relationships with improved efficiency of operation. The triangular area bounded by the Main Service Road, Sneads Ferry Road, and Louis Road is proposed for development as the maintenance area for the Second Marine Division and the Force Troops Maintenance Facilities because it fulfills these requirements. Existing maintenance facilities that

are scattered throughout the warehouse and storage areas are sub-standard and inadequate. Other existing facilities presently located within the proposed maintenance complex area are also sub-standard temporary buildings that will have to be replaced. Development of the maintenance complex with modern adequate facilities is proposed. Second Marine Division maintenance facilities are to be consolidated adjacent to the Division billeting area and Force Troops maintenance facilities are to be consolidated in the area adjacent to the French Creek billeting complex. Second Force Service Regiment maintenance facilities which perform 4th Echelon maintenance for both the Second Division and Force Troops will be located within the maintenance complex in the most convenient location.

f. RELOCATE FIELD MEDICAL SERVICE SCHOOL TO HADNOT POINT.

As a separate Tenant Command, Field Medical Service School can be located in any geographical area and maintain its School identity. The primary needs of this School are its dependence for support from other Activities, and its need for some outside training areas. In view of the proposed relocation of Schools from Montford Point, Hadnot Point is the most logical choice for this relocation. The Field Medical Service School can be absorbed into the loading of Hadnot Point without any strain on the community facilities and Physical Plant. Existing barracks can be utilized for this School as soon as the French Creek facilities for Force Troops have progressed further. The necessary classroom and administrative requirements can be provided in an existing Barracks Building No. 59 and Building No. 60 will provide space for billeting purposes. These two buildings are convenient to the U. S. Naval Hospital and are quite convenient for the Staff and student needs with relationship to Exchange, Commissary, and recreational facilities. The relocation of this School to any other part of the Base would likely have a more significant strain on the existing facilities, thus resulting in a larger need for capital improvements. Due to the selected location, Student Officers assigned to the School can be assigned to Bachelor Officers' Quarters accommodations in the Paradise Point area.

g. IMPROVE PINEY GREEN ROAD AND ESTABLISH A NEW SERVICE GATE.

The traffic bottleneck at the Main Gate is caused by the heavy peak hour afternoon traffic leaving the Base. It is recommended that Piney Green Road, a present unimproved dirt road, be paved and extended along Sneads Ferry Road to connect into Louis Road. The pavement width should be 24 feet with 6-foot wide shoulders and should be controlled to handle one-way inbound traffic in the morning between 0630 and 0830 and one-way outbound traffic between 1530 and 1730. This would relieve the traffic congestion on Holcomb Boulevard during the periods of heavy peak hour traffic. Piney Green Road would also serve as a service entrance for heavy trucks, commercial vehicles, and other authorized private vehicles to relieve some of the heavy truck traffic on Holcomb Boulevard. Piney Green Road would also decrease the distance for truck deployment to Morehead City by 2-1/2 miles. By connecting Piney Green Road into the proposed NC-24 bypass around Jacksonville, much of the existing traffic congestion on NC-24 could be relieved. This may be possible through a coordinated effort with the State in developing a bypass.

h. INITIATE A FEASIBILITY STUDY ON AN INTRA-BASE RAPID TRANSIT SYSTEM.

The Traffic Study of Camp Lejeune, being conducted by the Army Transportation Corps, was not available at the completion of this Report. Preliminary data indicated a very significant portion of traffic in the Hadnot Point, Paradise Point, French Creek, and Hospital areas involved private vehicles used for both Military and personal purposes. In a great number of instances, the Origin and Destination Survey showed that short distance trips (within a geographical area or between two adjacent geographical areas) constituted a majority of the traffic problems.

Akin to the causes and effects of the traffic congestion in and around Hadnot Point are the parking problems caused by this intra-area vehicular traffic. The request for parking spaces, subsequently documented as Parking Needs, showed a duplication of needs because personnel needed a parking place both at their place of residence as well as at their place of work. Much of this problem cannot be alleviated; however, those enlisted personnel in the Hadnot Point/French Creek area apparently need some method of rapid

transit to replace the needs of private vehicles, and at the same time, the system must be much less formal than the traditional taxi and bus service.

A system of many buses and/or many trains may well solve the traffic and parking problems. It is obvious that the availability of suitable land falls far short of providing for all of the parking areas requested, and needed, by the Activities. A preliminary system of open-type continuous loop operated vehicles could provide the best answer to this problem. Following completion of the Transportation Corps' Traffic Study, it is recommended that a detailed study be initiated to show the economic feasibility of this approach.

i. INVESTIGATE THE DISESTABLISHMENT OF RIFLE RANGE.

In the preceding text, sufficient explanation of the Rifle Range operation has been given; it is a Command decision as to the feasibility of operating this unit solely for the isolation granted in the site west of New River. It is recommended that the requalification of personnel be administered without the operation of a separate geographical area. A trial session of selected Troops which show the relative difference in scoring ability between those Troops isolated for the two-week session, and those Troops who remained billeted in their old unit and were transported to a range for a practice firing. Since Pistol Ranges are available at Hadnot Point, the first step would be to compare the qualifying records of personnel on Pistol Courses. If this proved successful, the daily transportation of personnel to Rifle Range for use of the Known Distance Rifle Ranges should be undertaken. If the difference between records were within acceptable criteria, Rifle Range could be completely closed for its intended purpose. There would be no need to provide facilities (other than the ranges themselves) at any other part of the Base since the Rifle Range facilities are now, and will continue to be, duplicate to permanent facilities.

- j. POSSIBLE RELOCATION OF WATER-ORIENTATED RANGES, AND MODIFICATIONS TO EXISTING BASE SECURITY MEASURES TO FREE NEW RIVER FOR INCREASED MILITARY AND CIVILIAN RECREATIONAL PURPOSES.

The foregoing title is self-explanatory in terms of goals. The desirability of freeing New River for improved recreational facilities is not based on a complete Military objective. Wallace Creek Boat Basin and the associated recreation facilities here and at Onslow Beach apparently provide adequate facilities for the enlisted personnel stationed at the Base. Increased participation by Commissioned Officers and their families, and personnel residing off Base, would severely strain these recreational facilities. The City of Jacksonville and the nearby residents of Onslow County are nearly landlocked from the standpoint of useable waterways. This occurs even in view of the fact that New River runs directly from downtown Jacksonville to the ocean, and the Inland Waterway is only several miles distant. From the standpoint of long-range benefit to the City of Jacksonville, and subsequent indirect benefit to its residents and the Military personnel in the area, additional water traffic would be desirable. The balance of advantages to the citizens in general as opposed to the disadvantages to the Marine Corps by increased access to the River, should be the subject of a special study.

The key recommendation at this point is to urge the Activity into greater participation into affairs, and to try to identify realistically what problems would occur with increased use of New River and its tributaries.

- k. REINSTATE A METHOD OF CONTINUING THE LANDSCAPING AND CONSERVATION PROGRAM CONDUCTED BY THE BASE IN EARLIER YEARS.

For a number of years, the Base conducted a regular program of site conservation and landscaping through the operation of a Nursery/Greenhouse facility financed from non-appropriated funds. Apparently, the existence of this program (and the use of associated physical facilities) was ruled an ineligible project by DOD and the policy was discontinued in recent years.

The Marine Corps has taken a great deal of pride in the overall appearance of this, their largest training Base on the east coast. It is unfortunate that subsequent developments on the Base have not been treated with equal care. It is recommended that the Base Commander be authorized to initiate a regular

program of site improvement and landscaping, using excess facilities for the operations, and Public Works' vehicles for transportation. It is anticipated that the personnel would be civilian employees operating under Base maintenance to conduct the planning and implementation of this program.

1. INITIATE DETAILED ENGINEERING STUDIES TO DETERMINE THE FEASIBILITY OF CENTRAL AIR CONDITIONING SYSTEMS.

In highly developed areas with a concentration of facilities that are authorized to be air conditioned, a central chilled water system can prove to be economically justifiable. A diversity use factor could reduce tonnage requirements as much as 50 percent which in turn would reduce operational costs. Central station equipment would also reduce maintenance costs, and would eliminate the need to provide extra space for major mechanical equipment in each building.

It is recommended that a complete engineering study be conducted to determine the economic feasibility of central chilled water systems. If the additional cost requirements of an underground chilled water distribution system can be offset by reduced operating and maintenance expense, the central system would be unquestionably advantageous.

In the Hadnot Point area four or five central station systems might prove to be more economical than only one large central system. Multiple standard size commercial water chillers will offer an initial cost savings over special order large size units, and operation under low load conditions would also prove to be more economical. The concentration of the proposed developments in the Courthouse Bay area makes a central system appear to be advantageous for this area.

m. IMPROVE BASE SECURITY AND SAFETY BY A NETWORK OF PEDESTRIAN AND VEHICULAR LIGHTING SYSTEMS.

The present approach to exterior lighting is to incorporate minimum facilities with each proposed MILCON item. This leads to fragmented systems of lighting, and serious gaps in safety and security protection.

It is recommended that a long-range plan of pedestrian and vehicular lighting systems be designed for an ultimate development of the Base as outlined in this Master Plan. As each MILCON item is initiated, a portion of this overall plan can be expedited.

G. OTHER PLANNING RECOMMENDATIONS

The proposed Land Use Plans, in Part III, generally establish a long-range plan to be used as a guide in the future development of each area. In addition, the Land Use Plans define the following:

1. Designated Command Areas
2. Consolidation of Functions
3. Future Expansion Areas
4. Natural Boundaries to be Retained

Other planning recommendations essential to overcoming facility deficiencies of basic operations are summarized below by functions. This summary is intended only to provide the reader with the basic scope of work anticipated under each of the major Category Code headings. Detailed project description and program cost estimates are included in Part II of this Report.

1. OPERATIONAL FACILITIES

(Category Code 100 Series)

a. FUELING FACILITIES

With few exceptions, fueling facilities existed under different Category Codes and in locations not currently in use. The prime objective in this particular aspect was to utilize as many of the existing facilities as possible by changing or consolidating misnumbered Category Codes where appropriate. In this manner, definite economies were realized while satisfying the majority of the BFRL Requirements. A fueling facility with 12 OL's is authorized in the BFRL for Second Division and Force Troops vehicles. A new facility, centrally located in the vicinity of the maintenance complex, with 12 OL's is required to overcome the deficiency. Moving Second Amtrac to Mile Hammock will require 4 OL's and this facility should be consolidated with the proposed new Amtrac Maintenance facility. Motor Transport School, which will move to Courthouse Bay will utilize existing fueling facilities, presently used by the Second Amtrac Battalion.

b. COMMUNICATIONS

Marine Corps Base Communications Facilities presently located in the Base Headquarters Building is overcrowded and this space is urgently needed for administration functions. It is proposed that existing Building No. 13 be remodeled as a Communications Center for Marine Corps Base. Additional space can be added to the building if it is necessary. A similar facility for the Second Division is proposed and Building No. 419 is to be remodeled for this purpose. A new facility is planned for Force Troops in the French Creek Complex.

c. TELEPHONE EXCHANGE

A new Centrex Telephone Exchange System was installed at Camp Lejeune during the preparation of this Master Plan. This new system provided urgently needed flexibility in the communications system on Base, and provided significant improvement to the off-Base service. It is recommended that the existing exchange facilities in Headquarters Building No. 1 at Hadnot Point be relocated into Building No. 37 when the Provost Marshal Facility is moved to Building No. 3. The Telephone Exchange Building at Camp Geiger will have to be relocated in order to build the Second Increment of Enlisted Men's Housing in this area. Other existing telephone exchange buildings on the Base are to be remodeled and retained for this function.

d. PHOTOGRAPHIC BUILDINGS

It is recommended that the Second Division Photographic Facility be relocated to the Division Billeting Area in Building No. 445 for convenience to the unit that operates this facility. Remodeling of the building for this function will be required. The Marine Corps Base Photographic Facility is to remain in the present location and Building No. 11 is to be utilized for additional space requirements.

2. TRAINING FACILITIES

a. ACADEMIC AND GENERAL INSTRUCTION BUILDINGS

Nearly 90 percent of the work in the Operational and Training Category falls under the classification of academic and General Instruction Space. Nearly one-third is at Hadnot Point,

a third at French Creek, and an equal amount at Courthouse Bay. In every case, existing facilities were examined for suitability for this use prior to the planning of any new construction. In some cases, significant savings were available by the utilization of existing structures planned to be remodeled or modified under another major category.

One of the major recommendations is to consolidate the Service Support Schools and Combat Support Schools in the Courthouse Bay area. In addition to these specialized schools, there is a BFRL deficiency in GMS training classrooms for the Second Division and Force Troops Commands. To utilize excess space, four 800 square foot classrooms are proposed in each of the fifteen existing Mess Halls in the Second Division Billeting Area. It is recommended that two classrooms in either end of the dining area be provided during the scheduled remodeling and air conditioning of each Mess Hall. Other existing classroom facilities in the five Regimental areas are to be remodeled, air conditioned, and retained. Remaining deficiencies need to be justified before additional facilities can be planned.

Second Force Service Regiment and Force Troops Academic and General Instruction Classrooms are programmed as a part of the French Creek Complex. Similarly, 1st ITR Complex in Camp Geiger contains academic facilities programmed as an integral part of the new siting and construction phasing currently under way.

b. APPLIED INSTRUCTION BUILDING

Specialized courses of training for the Service Support Schools and the Engineering School will require 190,000 square feet of Applied Instruction Classrooms in the Courthouse Bay area. It is recommended that complexes be planned to include all training and administration space requirements for each separate school in order to establish a specific school identity. This is in concurrence with the major recommendation of relocating the Service Support Schools in the Courthouse Bay area.

Other Applied Instruction facilities for the Second Division, Second Force Service Regiment and Force Troops are programmed in accordance with existing deficiencies and are sited as appropriate to the functional requirement.

c. ARMORIES

A requirement exists for Armory facilities in each of the geographical areas within the Base. More than one Armory is required in an area such as Hadnot Point, where a large contingent of Marines is billeted, and this basic loading involves more than one major unit. New facilities are planned in conjunction with the French Creek and Camp Geiger complexes, and the existing buildings in the Hadnot Point area have been utilized wherever possible for this function as it relates to the needs of the units in each of the five Regimental areas.

d. SMALL ARMS RANGE

There is a BFRL requirement for a Small Arms Range in the Hadnot Point, French Creek, and Camp Geiger areas that is almost totally deficient. New facilities have been sited in the plan of development but are pushed back in the Fiscal Year Program because of budget limitations.

e. TRAINING MESS

Relocating the Food Service School to the Courthouse Bay area will require new facilities for this purpose. One of the training Messes is to be incorporated with the Officers' Mess that is planned in the area and is to be used in connection with Advanced Stewards Training courses. The other training Messes are to be incorporated into the total design of the Food Services School Complex.

3. MAINTENANCE FACILITIES

(Category Code 200 Series)

Existing Maintenance facilities at Camp Lejeune are almost totally inadequate to efficiently maintain the complex mechanical equipment in use and new facilities should be given a top priority in the Fiscal Year Programs. One of the major recommendations is to plan a maintenance area complex in the Hadnot Point - French Creek area for Second Division, Force Troops, and Second Force Service Regiment Maintenance Facilities.

a. SECOND DIVISION

The area bounded by Louis Road, Main Service Road, and Cogdels Creek, is proposed as the Second Division Maintenance area. The temporary metal buildings presently in use are to be removed and new permanent structures are to be constructed in this area for the units that have the responsibility for maintaining specific equipment. The siting of the proposed buildings has been arranged for easy accessibility to tracked vehicle trails and roads. Parking and storage of vehicles, adjacent to the Second Echelon Maintenance facilities, are proposed.

b. FORCE TROOPS

Force Troops Maintenance facilities are planned in the area north of the Main Service Road adjacent to the New French Creek Complex. There are two new facilities that have been recently completed in this area and the additional maintenance facilities are programmed in the first fiscal years in order to relocate Force Troops facilities presently in the Second Division area, and expedite development of Second Division Facilities. Specific Line Items describe the facility requirements that are authorized and planned to satisfy the existing deficiency.

c. SECOND FORCE SERVICE REGIMENT

The Second Force Service Regiment of Force Troops performs the majority of the Third Echelon Maintenance work, and all of the Fourth Echelon Maintenance for all of the units at Camp Lejeune. In addition, this Unit provides some Fourth Echelon Maintenance for the 2nd Marine Air Wing at Cherry Point, North Carolina. The existing Second Force Service Regiment Maintenance facilities in the Warehouse and Storage area (near the rail lines at Hadnot Point) are sub-standard and not conveniently consolidated for efficiency of operations. It was originally recommended that Second Force Service Regiment be retained at Hadnot Point, providing new billeting facilities north of Sneads Ferry Road within walking distance of the Operational Shops. The Marine Corps has determined that Second Force Service Regiment would be incorporated into the French Creek area with its parent command, Force Troops. Based on that decision, the Second Force Service Maintenance facilities were located north of Main Service Road between the Force Troops industrial area and the Second Division facilities. This also places these

Maintenance Shops along the existing Tank Trails that relate to the vast training areas. At the same time, it was recommended that billeting for 2nd Force Service Regiment also be moved to French Creek.

When Second Force Service Regiment was superimposed upon the remainder of the Force Troops area, it was proposed that a new road be constructed parallel to Main Service Road, providing normal vehicular entrance at only the east and west sides of the maintenance area. This would eliminate the need for the existing entrances from Main Service Road now being utilized in the buildings currently occupied. This new access toward the north of the existing buildings will provide an easily maintained and controlled service point for all of the existing and proposed Shops.

d. SECOND AMTRAC BATTALION

Relocating the Second Amtrac Battalion to the Mile Hammock Bay area, will require the construction of a new Amtrac Maintenance facility. The existing facilities at Courthouse Bay, presently used for this purpose, are inadequate because of the size and weight of the Amphibian Tractors and the magnitude of the service that is required for these vehicles. New facilities that are designed for this specific purpose are recommended. Locating the facility in the Mile Hammock Bay area will reduce operational and maintenance expense and efficiency can also be greatly improved.

e. MOTOR TRANSPORT SCHOOL

The existing Amtrac facilities at Courthouse Bay are adequate for Motor Transport School vehicle maintenance and training, and it is proposed they be improved and used for this purpose. Operation of the drivers' training courses from this remote part of Courthouse Bay will eliminate the disturbing element of truck movements in an academic area and will effectively utilize existing facilities, roads and trails in the immediate area.

4. WAREHOUSE STORAGE

(Category Code 400 Series)

Only 4 percent of the final Master Plan is involved with the creation of new or expanded Warehousing and Storage facilities.

At the beginning of this investigation, it was indicated that a significantly larger proportion of the total plan would involve Warehousing and Storage; however, the consolidation of functions, and the relocation of Units, helped to alleviate the magnitude of this particular problem.

a. HADNOT POINT

There is adequate Warehouse and Storage facilities in the Hadnot Point area; however, it is recommended that storage functions be consolidated in designated areas according to Commands for improved efficiency and control. Providing adequate space for other functions that are presently performed in Warehouse designed structures will return a number of Warehouse Buildings to their designed use. Specific Warehouse allocations, and the construction or major renovation of Warehouse and Storage space, is covered in detail in Part II of this Planning Report.

b. FORCE TROOPS

The Storage situation for Force Troops (less Second Force Service Regiment) would not prove to be a significant problem. When Second Force Service Regiment was superimposed on the French Creek area, the aggregate Warehouse and Storage Requirement was significant. Unit Storage is planned for each of the Sub-Units within the French Creek area and a major Ready-Issue Warehouse (in one or two phases) is included in the unprogrammed years for French Creek. In the interim, certain smaller buildings at Hadnot Point were vacated in the consolidation of units, and these should provide adequate Storage for these infrequent requirements. Rather than to construct additional Warehouse space at French Creek for the Force Troops Command, it is suggested that the existing facilities at Hadnot Point serve this purpose with a minimum of capital improvements.

c. SECOND AMTRAC BATTALION

With the relocation of this Unit to the new development at Mile Hammock Bay, the existing Storage facilities at Courthouse Bay (or with other Force Troop Storage in the French Creek - Hadnot Point area) will be entirely too remote from this Unit to adequately serve its needs. Additional Warehousing is programmed for the Mile Hammock Bay area and is to be constructed at the same time this new geographical area is developed.

5. MEDICAL AND DENTAL

(Category Code 500 Series)

Less than 5 percent of the new programmed construction at Camp Lejeune is involved in Medical and Dental facilities. This Category does not include the work at the U. S. Naval Hospital which, although a consideration in the development of this Master Plan, did not significantly alter the overall requirements for these types of facilities.

a. MEDICAL

The existing Dispensary Buildings in the Hadnot Point area indicate economical rehabilitation will bring these facilities up to the basic facility needs. At French Creek, and at Camp Geiger, the Dispensary facilities were either in severe sub-standard condition, or not properly located to serve the intended needs. Consequently, new Dispensary Buildings are recommended for these two areas. At Courthouse Bay, Building No. BB-5 can be air conditioned and remodeled to provide the desired facilities. At the new Mile Hammock Bay area, the Dispensary needs are of such small magnitude as to make the construction of new facilities here unrealistic. In this case, one or more of the Enlisted Men's Barracks at Mile Hammock Bay should be so designed as to incorporate these additional facilities.

b. DENTAL

Construct a new Dental facility at Hadnot Point to consolidate all Dental functions in this area and eliminate the separate existing facility in each Dispensary. Construct a new Dental facility in the French Creek and Camp Geiger areas as a part of the new complexes that are being built and remodel Building BB-10 for a Dental Clinic to serve the Courthouse Bay area.

6. ADMINISTRATION FACILITIES

(Category Code 600 Series)

There are 21 primary use Administration Buildings in the five Regimental areas that are sub-standard due to poor lighting and the need for air conditioning. It is recommended that all of these facilities be remodeled and air conditioned and an addition be provided to the Second Division Headquarters Building to consolidate Administration functions that are presently dispersed throughout the area. Company Administration functions presently located in the Enlisted Men's Barracks should be retained and the spaces rehabilitated during the remodeling of the Barracks.

New Administration Buildings are planned in the development of the French Creek and Camp Geiger Complexes. New Administration Buildings are recommended for the Service Support Schools in the Courthouse Bay area and should be designed as a part of each School complex.

A new Administration Building is also proposed in connection with the development of the Mile Hammock Bay area for the Second Amtrac Battalion. Relocation of Second Force Service Regiment to the French Creek area will require an additional Administration facility which is planned in conjunction with the construction of Second Force Regiment Billeting and Messing facilities.

7. BILLETING AND MESSING

(Category Code 700 Series)

Nearly half of the entire MILCON Program for Camp Lejeune is involved with Billeting and Messing facilities. The principal reason for emphasis was the existence of open-bay Barracks throughout the Base, and the revised criteria calling for three-man rooms as the minimum facilities for all enlisted personnel. Faced with a deficiency of billeting spaces even under the open-bay concept, the Activity was directed to plan for satisfaction of deficiencies on the much larger parameter of the basic three-man rooms.

The majority of existing billeting at Lejeune was in fair condition. During the past few years, a systematic program of remodeling the heads in each of the Barracks has been initiated

and is now nearly complete. The billeting at Montford Point was beyond economical repair. The same situation existed at Camp Geiger where a new ITR Complex is already underway. Billeting at Rifle Range is seriously overcrowded; however, the question that shadows Rifle Range's future existence prevents any major renovation of this work. The remainder of the geographical areas was in similar condition to the large billeting facilities at Hadnot Point. The existing Barracks at French Creek (or those not in inventory) are essentially brand new.

In view of the large investment in present billeting facilities, alternative approaches were developed to determine the most economical manner in which the additional billeting spaces could be provided. This problem centers around the situation at Hadnot Point, and particularly the Second Marine Division, where so many identical Barracks had just been provided with new heads. Part III of this Report illustrates the plan finally accepted by the Activity and CMC for the further development in Hadnot Point. By the construction of these reasonably large additions to the existing Barracks, the Units could be housed with some sort of Unit integrity and each typical Battalion was faced with only two billeting complexes to administer and secure. The billeting at Montford Point was negated by the decision to move these Activities to Courthouse Bay; however, this accentuated the problem in Courthouse Bay. In this area, the major difficulty arose in trying to provide as much flexibility as possible between the various student loads on the School programs. This was accomplished with a minimum of major construction. Mile Hammock Bay, selected for the location of the Second Amtrac Battalion, is too remote from Courthouse Bay to consider billeting this Unit with the Support Schools. Consequently, new billeting has been planned for the Mile Hammock Bay area. At Camp Geiger, the ITR Complex is being continued as envisioned in the partial Master Planning approved some years ago. At French Creek, the Marine Corps directed a continuation of the Barracks plans already under construction or occupied for the further development of this area even with the influx of the Second Force Service Regiment and to French Creek. For the purpose of this Master Plan, all renovated and new billeting has been based on the current requirement of three-man rooms for the lower grade enlisted men.

Messing facilities posed a unique problem in this Study due to a theoretical excess of Mess Halls. In most cases, the Mess Halls were set up to handle a specific Unit size and therefore located during the initial construction in the early 1940's to

suit that Unit's particular needs. In the interim, the increased efficiency in Kitchen operations, and the lack of annexed Units to completely fill these Mess Halls, left most of the Mess Halls oversized. Since these buildings were ideally located to the prime Unit they served, the excess space has been taken to form General Instruction and Academic facilities serving each of the small Units. In this manner, the optimum use of existing buildings can be realized with a minimum of capital outlay.

In view of the complexity of remodeling the Mess Halls, remodeling and adding on to the existing billets, and some additional space in (and improvements to) the Administrative facilities, it has been proposed that each basic typical Battalion area be constructed as a particular phase usually grouped together in one particular Fiscal Year Program. The retention of this grouping is essential to the overall success of this plan.

A new single Mess Hall has been planned as part of the new complex for ITR at Camp Geiger with no work planned for the Montford Point or Rifle Range areas. Consistent with the minimum overall development of Mile Hammock Bay, a new Mess Hall is planned for that area. The expansion of French Creek requires additional Messing facilities and two Mess Halls are programmed over the span of completion of this area.

8. COMMUNITY FACILITIES

(Category Code 700 Series)

Community facilities, comprising less than 10 percent of the entire Master Plan, are distributed at Camp Lejeune in the following manner; nearly half at Hadnot Point, one-fourth at French Creek, one-fourth (or less) at Camp Geiger, and the remaining 10 percent at Courthouse Bay. This distribution is almost in direct proportion to the number of Troops being handled at each of these geographical areas.

The MILCON Phasing as proportioned above does not include the many existing facilities to be retained. In the somewhat isolated portions of the Base; that is, Camp Geiger, Courthouse Bay, and Mile Hammock Bay, the Community facilities were determined to be of necessity somewhat self-sufficient in that the travel distances to the main areas at Hadnot Point were prohibitive. The French Creek area is not too remote from the main facilities at Hadnot Point to consider consolidation;

however, the billeting load at French Creek was too large to be absorbed into the existing (or expanded) Community facilities at Hadnot Point. When Second Force Service Regiment was originally proposed to remain at Hadnot Point, this Unit could have been absorbed into the Hadnot Point facilities; however, the overall economics were not strong enough to be the critical deciding factor. Therefore, French Creek is provided with most of the Community facilities duplicated at Hadnot Point with the exception of the Main Exchange, the Commissary, and certain special amenities such as Handball Courts, etc. Hadnot Point can also serve the French Creek area, as well as the other outlined areas, for the principal functions of Libraries, Commissaries, etc.

At Courthouse Bay, a small Library, Theater, Recreation facilities, and Hobby Shops, are considered essential to maintaining the morale of the Marines stationed in this area. At nearby Mile Hammock Bay, only the bare minimum of Community facilities (a small Exchange and EM Club) are included in the plans and these are incorporated into one or more other structures for economic reasons. Only where compatible functions could not be created, or existing facilities economically rehabilitated, was any step taken to program new facilities into the construction plan.

An EM Club, Exchange, Gymnasium, Swimming Pool, and small NCO Club are planned at the Camp Geiger area. Camp Geiger is particularly unique in view of the heavier restrictions on the students in this Regiment.

The Community facilities at Hadnot Point were far larger and in better shape than any other place on the Base. Wherever possible, existing facilities have been utilized with minor or major improvements as appropriate. These Community facilities are also shared by other smaller Tenant Commands at Hadnot Point such as the Field Medical Service School and U. S. Naval Hospital.

9. UTILITIES

(Category Code 800 Series)

a. ELECTRICITY

Construct a new electrical distribution line between the Sub-Station and the central area of Hadnot Point. This new distribution line is required to furnish adequate power for the new construction and air conditioning that is planned in the Hadnot Point and French Creek areas.

Construct an electrical feeder line from Sneads Ferry Road to the proposed complex in the Mile Hammock Bay area. Additional power requirements should also be evaluated for the Courthouse Bay area to insure that adequate power is available on the existing distribution lines feeding the southern area of Camp Lejeune.

Improved street lighting is recommended in the Hadnot Point and Paradise Point areas. The existing distribution lines in these areas should also be evaluated on the basis of future power requirements.

b. HEATING

On the basis of proposed requirements, it is recommended that a new Heating Plant be constructed to serve all facilities in the French Creek area. The existing steam line from the Second Marine Division Maintenance area would be abandoned and the steam line would serve the Maintenance area only. The additional boiler to the main Heating Plant would be added only for the new construction that is planned in the Hadnot Point area if in the final analysis it is required.

Extension of the existing steam distribution to serve the proposed Staff NCO Complex is recommended.

There is some additional capacity in the Courthouse Bay Steam Plant that can be used for the proposed development of the area. An additional boiler may be required in the final analysis of total future development.

c. WATER FACILITIES

New Water Treatment facilities are required to serve the Family Housing area and new wells and raw water lines are essential in the construction of the Mile Hammock Bay area. Extensions of water lines will be required at various places around the Base as modernization or new construction is implemented.

d. TRAFFIC AND PARKING

The recommendations outlined in the Traffic Engineering Study conducted by the U. S. Army Transportation Engineering Agency were available only in a brief outline form for incorporation into this Master Plan. Many of the recommendations concerning

private and mass Transit Systems were based on some of the raw data provided under this initial Study. The full contents of this Traffic Report should be evaluated in depth to see what modifications, if any, should be made in the existing Road System.

In the Hadnot Point area, the widening and extension of Louis Road to join the new Piney Green Road and Service Gate comprise the major improvements at the Hadnot Point area. In some cases, existing unused roads have been selected for abandonment in order to provide a closer knit physical complex to serve each of the Regiments within the Second Marine Division.

The preliminary parking data provided by the Transportation Corps Study, confirmed that most of the demand for parking space at Camp Lejeune (which in turn translates basically the Hadnot Point) centers around the need for each individual to have two parking places; one near his Barracks, and one near the place where he works. It is strongly recommended that this Traffic Study be analyzed in conjunction with a proposed Rapid Transit System which could easily eliminate the requirement for dual parking facilities. In most cases, pull-in off-street parking is suggested for the areas along the principal roads within the Hadnot Point area with no major improvements to be made in the parking facilities until such a time as the Traffic Report has been completed and evaluated.

e. AIR POLLUTION ABATEMENT

Provide electrostatic precipitators on each of the four coal burning boilers in the central Heating Plant at Hadnot Point to reduce the particulate matter emission to less or equal to the criteria established by the U. S. Department of Health, Education, and Welfare. This Plant has no soot or fly-ash control and the emissions exceed the limitations established in Executive Order 11282 for Air Pollution and Abatement Control.

MILCON PHASING BY AREAS

AREAS	ESTIMATED COST IN 1,000.00 DOLLARS							
	FY 0	FY 1	FY 2	FY 3	FY 4	FY 5	SUB-TOTAL	UP
HADNOT POINT	1,521	2,289	2,446	6,665	3,537	3,212	19,670	34,067
FRENCH CREEK	-	-	8,542	1,675	10,101	6,187	26,505	11,405
CAMP GEIGER	-	-	53	3,900	1,735	1,856	7,544	4,863
COURTHOUSE BAY	-	-	-	-	2,510	5,850	8,360	7,441
BASEWIDE/MISC.	-	-	7,029	1,904	2,490	3,070	14,493	7,317
MILE HAMMOCK BAY	-	-	-	4,251	-	-	4,251	-
TOTAL	1,521	2,289	18,070	18,395	20,373	20,175		
							SUB-TOTAL	
							80,823	
							UP TOTAL	
								65,093
							GRAND TOTAL	145,916

MILCON PHASING BY FUNCTION

FACILITY CLASS		ESTIMATED COST IN 1,000.00 DOLLARS							
CODE	DESCRIPTION	FY 0	FY 1	FY 2	FY 3	FY 4	FY 5	SUB-TOTAL	UP
100	OPERATIONS	-	-	53	-	-	-	53	134
171	TRAINING	-	-	-	636	690	5,381	6,707	4,713
200	MAINT./PROD.	799	1,709	2,372	1,906	1,640	114	8,540	2,217
400	STORAGE/SUPPLY	-	-	332	167	644	-	1,143	1,786
500	MEDICAL	352	-	598	29	29	-	1,008	1,630
600	ADMINISTRATION	370	-	27	2,525	538	1,399	4,859	6,885
720	TROOP HOUSING	-	580	9,538	10,898	13,677	8,697	43,390	29,805
730	COMMUNITY FACILITIES	-	-	150	330	665	1,514	2,659	12,608
800	UTILITIES	-	-	5,000	1,904	2,490	3,070	12,464	5,315
TOTAL		1,521	2,289	18,070	18,395	20,373	20,175		
SUB-TOTAL								80,823	
UP TOTAL									65,093
GRAND TOTAL								145,916	